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ABSTRACT

Computer software and multimedia applications for Russian are scarce and most of the available software still falls into a traditional grammar/drill category. It is necessary to actively pursue Russian language software development of a more communicative, interactive nature. A review of commercially available software for Russian using Brown's (1990) three-tiered categorization shows that most packages all fall into the first category, where no adaptions by the teacher are possible without the appropriate authoring software. These programs do not maximize the computer's capabilities of providing communicative tasks, rather, they limit interaction to structural feedback and therefore cannot be construed as sophisticated multimedia. Factors that contribute to the current state of software for Russian include market concerns, lack of a standardized Russian keyboard, and lack of software developers who are knowledgeable in second language acquisition. Teachers may find that authoring systems would be a viable temporary solution to the lack of innovative multimedia applications in Russian. Four specific authoring systems are described. Information on selected authoring systems and software companies and a bibliography are appended. (JP)

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MULTIMEDIA IN THE RUSSIAN CLASSROOM

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I. Introduction

During the 1991 ACTFL Conference several sessions were devoted to demonstrating the most recent technology in computer software and multimedia applications for a number of languages. Most of the software presented was quite elaborate and no doubt had taken designers most of the year to develop. Presentations dealt with the most commonly taught languages as well as Chinese and Japanese. Nothing was demonstrated for Russian, however, which lags far behind in software availability and quality.

The purpose of this paper, therefore, is to discuss what kind of multimedia is feasible for Russian, and what special difficulties exist in creating such multimedia. We will also address the adaptability of some of the currently available authoring systems for use in the Russian language. We limit our discussion here to products that were commercially available as of the first half of 1992.

II. Background

While the use of computer assisted language instruction is scarcely 30 years old, the changes that have occurred during this time are considerable, evolving from some of the earliest efforts using a mainframe (such as PLATO at the University of Illinois) to the present-day microcomputer environment with ready-made authoring systems and authoring languages with digitized audio and video capability. In spite of attempts, however, to create true multimedia with these tools, we are still far from reaching the maximum technological and instructional potential of the computer.

Chun and Brandl (1992) discuss this issue of maximizing the computer's capabilities. They argue that the lack of standardized terminology can sometimes lead to misinterpretation of software performance. For example, one of the terms frequently used to describe software is *interactive*. Chun and Brandl question this term since it appears to refer only to "form-restricted interaction...rather than relating

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correct form to its meaning or to a communicative goal (p. 255)." They claim that much of the newly-designed software accompanying foreign language textbooks, even those "significantly enhanced by extra-textual hypermedia features, such as color graphics and high-quality sound: once 'stripped' of those features, ... appear to be rather traditional in their pedagogical approach (p. 256)." In other words, a traditional form-based method of instruction has been packaged in an attractive new wrapping. According to Chun and Brandl, foreign language software, however, should move from this narrow scope of application, where interaction is limited to structural feedback, more in the direction of communicative interaction.

It seems that software developers have paid more attention to the packaging than to content. To change this trend, it is imperative that the language software developer be knowledgeable of latest theories of second-language acquisition and methods of language instruction in addition to the more technological aspects of software design.

As to Russian, most of the software still falls into a traditional grammar/drill category (Brown,1990) where the student exercise book in written format has been replaced with one in computer format (Leaver,1991), without the slightest attempt at creativity even in the packaging. This situation should not be so surprising to teachers of Russian since the entire field of Russian language instruction has traditionally lagged behind that of the more commonly taught languages in the acceptance, development, and use of "innovative" approaches to language teaching, as well as in the use of technology.

While we accept that there is a place for structural exercises for such a highly inflected language as Russian, we, nevertheless, feel that it is imperative to actively and vigorously pursue Russian language software development of a more communicative (interactive) nature. Since Russian is "a late arrival on the multimedia scene," software developers should be able to learn from and build on the experience of developers in other languages.

III. Commercially Available Software for Russian

For the purpose of this paper, the following list of criteria was used to evaluate foreign language software:

* Does the software maximize computer's capabilities?
* Is the software interactive?
* Is it one step beyond being a grammar drill?
* Does it give students feedback and help?
* Is it easy for students to use?
* Does it have monitoring capabilities (scoring, attendance, etc.)?
* Are there different levels of difficulty?
* Is the software bug-free?
* What is its educational value for money?

In addition to the above criteria, we also used Brown's (1990) three-tiered categorization, which is based on the degree of modification capabilities of software. The first category consists of software with predetermined features that cannot be extended or modified without sophisticated knowledge of programming. The second category enables the teachers to create their own drill files within the parameters of the existing program. The third category is the most versatile in that it allows teachers to modify applications both in structure and layout.

Most of the commercially available software for Russian comes from Hyperglot Software Company (*Word Torture, Noun Tutor, Verbal Aspect, and Pronunciation Tutor*) and Gessler (e.g., *Russian the Easy Way*). All of these packages fall into Brown's first category, where no adaptations by the teacher are possible without the appropriate authoring software. They offer structural drills where students type in the correct form of a given prompt, with no discourse level context, and often not even sentence level context, being provided. Thus, these programs do not maximize the computer's capabilities of providing tasks of a more communicative nature; rather, they limit interaction to structural feedback. In addition, due to the lack of a standardized keyboard layout for Russian, students are often confronted with having to learn a different keyboard for different software packets. As to other features, these programs provide help screens as well as monitoring of

student performance (limited to scoring), both of which seem to be adequate for the task involved. Although there are tasks of varying difficulty level, there is no multi-layering of difficulty of individual tasks. Overall, these programs provide the structural exercises essential for students learning an inflected language. While some of the above do offer limited audio components, none can be construed as sophisticated multimedia since they do not provide true communicative interaction.

Why is the quality and quantity of commercially available software for Russian no greater than it is? Some of the main reasons are:

1) Lack of software developers knowledgeable in theories and practice of second language acquisition.
2) Caution on the part of publishers to invest in Russian software because of limited market.
3) Lack of a standardized Russian keyboard.
4) Lack of multimedia extensions, such as videodiscs. The only feasible multimedia applications for Russian at this point include digitized audio and video.

IV. Developing Software with Authoring Systems

Since very little innovative material is commercially available for Russian, teachers may want to develop some on their own, using various types of adaptable software that would fit into Brown's second and third categories. Depending on the different needs of the class, the teacher may wish to write additional structural exercises in various formats, such as questions and answers, matching, multiple choice, cloze, open-ended responses, translation, transformation, and substitution. Such exercises can easily be written by using structured template systems, while more complicated interactive multimedia programs call for more versatile authoring systems.[1]

We based our review on a selection of authoring systems that were available through the first half of 1992 (See Appendix for detailed

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[1]The term *authoring system* is often generalized to apply to programs (including templates) with varying degrees of flexibility. In practice, some programs simply have an editing feature, while templates let a teacher enter text without changing the format. Finally, more complex authoring systems allow for almost unlimited creativity.

evaluations). Since the number of multimedia extensions for Russian is limited, we restricted ourselves to systems that would not require peripherals, such as video disc player, or even external tape recorders. We were left, therefore, with digitized audio and video, both of which run without any external devices. Of concern also was time efficiency: program developing time should be in proportion to utilization time. The authoring systems ranged from structured (MacLang and Dasher) to less structured (IDI Author and Hypercard). The choice between structured and less structured systems may also be dependent upon the teacher's level of programming skills.

MacLang is the only one of these four systems with inbuilt Russian fonts. This may turn out to be a hindrance, however, since one cannot substitute a keyboard which students may be more familiar with. In addition, the graphic layout is very limited in that font size and style cannot be changed. However, MacLang may be appropriate when students have not been introduced to another keyboard previously. Creativity with this program is restricted to basic drill exercises with limited possibilities for graphics or multimedia.

Dasher offers more opportunities for creative layout as well of types of exercises, but true communication is still limited. Dasher does not have a Russian keyboard, although it runs well with certain Russian keyboards in the System File. Since some of the special keys on the regular keyboard are reserved for commands that run Dasher, selection of the Russian keyboard has to be made so as not to interfere with these command keys. Of Dasher's multimedia support devices, only digitized audio can be utilized for creating Russian documents.

IDI Author is a Hypercard template stack that allows for creation of interactive communicative documents, including multiple correct answers. Since IDI Author is a Hypercard stack, creativity is limited only by the skills of the teacher. For the teacher who is less versed in Hypertalk, IDI Author has an inbuilt question-answer mode that facilitates creation of documents. Like Dasher, IDI Author does not have an inbuilt Russian keyboard. Selecting a Russian keyboard, however, is much less problematical for IDI Author than for Dasher since only one key may overlap with the running of IDI Author (or any other Hypercard stack). Basic skills in opening text-fields in Hypercard are required, however, since the Russian font can be selected only by opening these

fields. As regards multi-media, IDI Author supports all features available in Hypercard, including digitized sound and video.

Hypercard itself is the most versatile of the four authoring systems, but demands that the software developer have a greater knowledge of programming. Even so, the Russian language may still cause a few additional problems in scripting, but these can be usually circumvented with a little effort and creativity. All the multimedia capabilities of Hypercard, ranging from digitized audio and video to running a CD-ROM or a video disc, are available to the teacher for creating interactive foreign language software.

V. Conclusion

While Russian textbooks have finally set out in the direction of more or less communicative approaches to language learning, the changes have just barely affected other modes of instruction, such as computer assisted language learning. While waiting for interactive commercial software to be developed, teachers may find that authoring systems would, in fact, be a viable temporary solution to the lack of innovative multi-media applications.

Appendix - Selected Authoring Systems

MacLang

Type of exercises: Vocabulary, fill-in-blanks, paragraphs (questions and answers), multiple choice, jumbled sentences and multiformat.
Creativity: Not easy
Hardware/software requirements: None
Russian keyboard: Included. Two Russian keyboards built in, one with American keyboard, the other with Russian. Has accented vowels. Only one font size and style available, but can write Russian and English on the same field (English with caps lock down).
Adaptability to Russian: Good
Feedback: Accepts one correct answer only.
Student help: Standard error responses.
Scoring: Yes
Graphics: Macpaint documents in a separate window.
Audio: Tandberg cassette recorder only.
Video: Video disc player.
Ease of use: Fast, but has some problems in the design.
Notes: Problems in the authoring mode, causes system errors, navigation difficult.

Dasher Authoring System, Conduit, University of Iowa

Type of exercises: Questions-answers, fill-in-blanks, transformation, scrambled sentences
Creativity: Possible
Hardware/software requirements: Russian font in the System Folder
Russian keyboard: None. Required modifications relatively simple. (procedure: Choose Default fonts from Setup menu. Select Russian fonts, sizes and styles. Then choose Character Set from Setup menu. Add the characters to be judged to correspond to Russian keyboard.)
Adaptability to Russian: Good to fair.
Feedback: One correct answer only.
Student help: A blinker points to the part of word or sentence with a problem.
Scoring: Yes
Graphics: PICT graphics (black &white or color) in a separate window. One picture per exercise.
Audio: Digitized sound
Video: Video disc player Sony and Pioneer
Ease of use: Excellent, fast
Notes: After initial modifications needed for typing in Russian, a good program for basic drill type exercises. Student help feature makes this program unique.

IDI Author, Athelstan

Type of exercises: Unlimited possibilities
Creativity: Unlimited possibilities
Hardware/software requirements: Hypercard 1.2.1 or later, Russian font in System Folder
Russian keyboard: None. Put Russian font in System Folder.
Adaptability to Russian: Good
Feedback: Multiple correct answers possible.
Student help: Unlimited
Graphics: Unlimited black&white graphics. Color graphics in a separate window or as a Quicktime still-frame.
Audio: Digitized sound
Video: Video disc players Sony and Pioneer, or digitized video.
Ease of use: Slow. More creative lessons require knowledge of Hypercard functions and scripting.
Note: This authoring system is not recommended for basic drill type exercises. Ideal for exploring and interactive exercises.

Hypercard Development Kit, Claris

Note: All of the above possible.

Selected Software Companies

Athelstan
P.O. Box 8025
La Jolla, CA 92038-8025
(619) 689-1757
(IDI Author)

Conduit
Oakdale Campus
The University of Iowa
Iowa City, IA 52242
(319) 335-4100
(Dasher)

Gessler Publishing Company, Inc.
Gessler Educational Softwar
55 West 13th Street
New York, NY 10011
1-800-456-5825
(Russian: The Easy Way, MacLang)

glps Products
P.O. Box 3454
Chapel Hill, NC 27515-3454
(Russian fonts for Mac)

Hyperglot Software Company
505 Forest Hills Boulevard
Knoxville, TN 37919
(615) 558-8270
(Word Torture, Noun Tutor, Verbal Aspect, Pronunciation Tutor)

Intellimation Library for the Macintosh
Dept. 2KF, 130 Cremona Drive
P.O. Box 1530
Santa Barbara, CA 93116
1-800-346-8355
(Hypercall)

Lingofun, Inc.
P.O. Box 486
Westerville, OH 43081
(614) 882-8258
(Flash Cards, Versatext)

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Rusistika -- The Russian Journal of the Association for Language Learning
Academic Computing
Computers and the Humanities
Slavic and East European Journal